

What is claimed is:

1. A yarn path guide for guiding traveling yarn, comprising a guide roll and a supporting member that supports the guide roll,

wherein the supporting member has a rotating shaft at a position twisted at a right angle to the rotating shaft of the guide roll, and the fiber bundle is guided automatically in the original yarn path direction, by inclining the guide roll with respect to the yarn path by rotating around the rotating shaft of the supporting member in response to variation of the yarn path.

2. The yarn path guide of claim 1, wherein the rotating shaft of the supporting member crosses the original yarn path.

3. The yarn path guide of claim 1 or 2, wherein α and β have the relation of $\alpha < \beta$, when the angle between the rotating shaft of the supporting member and the original yarn path entering said guide roll is α and the angle between the rotating shaft of the supporting member and the original yarn path coming out of the guide roll is β .

4. A manufacturing apparatus of fiber bundle package, comprising the yarn path guide of any of claim 1 to 3.

5. A manufacturing method of fiber bundle package by using the manufacturing apparatus of fiber bundle package of claim 4.

6. A fiber bundle traversing device, comprising a traverse guide for guiding the fiber bundle and a traverse mechanism of said traverse guide, for traversing the fiber bundle by reciprocating the traverse guide in the bobbin rotation direction by means of a traverse mechanism,

wherein the traverse guide has a yarn guide mechanism for guiding the fiber bundle deviating from the yarn path in the original yarn path direction.

7. The fiber bundle traversing device of claim 6, comprising the yarn path

guide of claim 1.

8. The fiber bundle traversing device of claim 7, wherein the rotating shaft of the supporting member crosses the center of yarn path.

9. The fiber bundle traversing device of claim 7 or 8, wherein the traverse guide comprises, at least, an upper guide roll of which the roll rotating shaft is arranged at a position twisted substantially at a right angle to the bobbin rotating shaft and a final guide roll of which the roll rotating shaft is arranged substantially parallel to the bobbin rotating shafts, and the yarn guide mechanism is arranged on the upper guide roll.

10. The fiber bundle traversing device of claim 9, wherein the roll rotating shaft of the upper guide roll is arranged on the downstream side of the yarn path.

11. A fiber bundle traversing device, comprising a traverse guide for guiding the fiber bundle and a traverse mechanism of the traverse guide, for traversing the fiber bundle by reciprocating the traverse guide in the bobbin rotation direction by means of a traverse mechanism,

wherein the traverse guide comprises, at least, an upper guide roll of which the roll rotating shaft is arranged at a position twisted substantially at a right angle to the bobbin rotating shaft and a final guide roll of which roll rotating shaft is arranged substantially parallel to the bobbin rotating shaft, and the upper guide roll and the final guide roll are arranged, respectively, so that the roll rotating shaft direction of the guide roll and the yarn path direction entering the guide roll have a positional relation twisted substantially at a right angle.

12. The fiber bundle traversing device of claim 11, wherein the length of the final guide roll in contact with the fiber bundle is 15 mm or more.

13. The fiber bundle traversing device of claim 11 or 12, having two or

more guide rolls of which the roll rotating shaft is arranged substantially parallel to the bobbin rotating shaft, including the final guide roll,

wherein the total length of these rolls in contact with fiber bundle is 25 mm or more.

14. The fiber bundle traversing device of claim 11, wherein the upper guide roll has a yarn path guide mechanism for guiding the fiber bundle deviating from the yarn path in the original yarn path direction.

15. The fiber bundle traversing device of claim 14, wherein the yarn path guide mechanism has the yarn path guide of claim 1.

16. A fiber bundle winding device comprising the fiber bundle traversing device of any of claim 6 to 15.

17. A manufacturing apparatus of fiber bundle package, comprising the fiber bundle winding device of claim 16.

18. A manufacturing method of fiber bundle package using the manufacturing apparatus of fiber bundle package of claim 17.